

February 22, 2018

*Sent via U.S. Mail and Electronic Mail*

Sean Sheldrake, RPM  
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Re: *Follow-up to November 2, 2017 Meeting re NW Natural/Gasco Site*

Dear Mr. Sheldrake:

We want to thank you, Lori Cora, and others for meeting with the undersigned River Mile 4-7 Group on November 2, 2017 in Seattle to discuss important forensic data we have collected and analyses we have performed regarding contamination at and emanating from NW Natural's Gasco site.

As you know, the members of the River Mile 4-7 Group are actively engaged in collecting, reviewing, and analyzing extensive forensic data regarding polycyclic aromatic hydrocarbon (PAH) impacts in the Willamette River and the data's implications for the Portland Harbor Superfund Site (Site) remedy. The River Mile 4-7 Group has invested substantial resources investigating sediments throughout River Miles (RM) 4 through 7 – work that has revealed the source properties of these materials and provided important new information to supplement the conclusions reached in the Site's Remedial Investigation, Feasibility Study, and Record of Decision (ROD).

In all of the areas we studied downstream of the Gasco site, the following conclusions were reached by the River Mile 4-7 Group's collective forensic chemistry experts:

- From NW Natural's Gasco site to RM 4 (the PAH Zone), sediments exhibit impacts of readily identifiable tar and residues of manufactured gas plant operations that are sourced from the Gasco site and are present at concentrations that greatly exceed sediment cleanup levels.
- The PAHs in the PAH Zone are predominantly pyrogenic in nature and chemically sourced from the Gasco site. The few petrogenic PAH samples found in our studies that may require remediation also likely originate from Gasco operations, which used substantial quantities of petrogenic PAHs as feedstocks.
- The contamination present on the Gasco site is an ongoing source of PAHs (and potentially other contaminants) to the river and the PAH Zone from stormwater, groundwater, and dense non-aqueous phase liquid (DNAPL) migration.

We heard your comments regarding detections of other contaminants of concern (COCs) and their co-occurrence with PAHs in RM 4-7, which Region 10 staff described as raising "an allocation argument" that does not necessitate a change in EPA's approach. EPA's current approach only requires the early action for the Gasco site to focus on the immediate off-shore impacts of Gasco's historical operations, even though the vast majority of the downstream

impacts are clearly documented to be related to NW Natural contaminants. In response, we note that the sediment management areas identified in the ROD for River Miles 4-7 primarily address PAHs, which are the only COCs that most if not all of the sites linked to parties in the River Mile 4-7 Group could have contributed to river sediments. While the River Mile 4-7 parties are willing to address any contaminants that they are shown to be responsible for, we believe it is more appropriate for EPA to require the clearly responsible party to address the problem it created, rather than force others to (1) do the work for NW Natural and (2) then try to recover these costs at some later time. It also makes sense for the RM 4-7 PAH remedy to be addressed as one comprehensive and likely more successful project, rather than running the risk of complications and failures due to a piecemeal approach.

As you will recall, we presented information at the November 2 meeting based on technical reports prepared by scientists at NewFields and Haley & Aldrich demonstrating that the overwhelming majority of pyrogenic PAH impacts to river sediments downstream of the Gasco site to at least RM 4 – the PAH Zone – originate from the Gasco site. The full versions of the reports and studies were provided to you and are listed as references at the end of this letter. At the November 2 meeting we also presented data indicating that the Gasco site is an ongoing source of PAHs (and potentially other contaminants) to the Willamette River from stormwater and groundwater (including DNAPL). We are unaware of anyone, including NW Natural, who has disputed this evidence.

We understand EPA's desire to demonstrate progress at Portland Harbor by requiring the timely design and cleanup of sediments at and downstream of the Gasco site that became highly contaminated as a result of historical activities conducted for more than a century at the former manufactured gas plant. These impacts extend over a large stretch of the river. Like many other individuals and companies with a connection to the Willamette River generally, and Portland Harbor in particular, the River Mile 4-7 Group was enthusiastic about EPA's decision to push NW Natural to address its extensive adverse impacts on this portion of the river. As such, we were greatly encouraged by and supported EPA's correspondence to NW Natural dated October 18, 2017, in which EPA identified the inadequacy of the pre-remedial design work plan prepared by Anchor QEA on behalf of NW Natural pursuant to its Agreed Order on Consent (2009 AOC) with EPA (No. 10-2009-0255). As you can understand, our enthusiasm shifted quickly to dismay when we learned on November 1, 2017 – without our knowledge and only one day before our own meeting with EPA on these very issues – that EPA had retracted certain key criticisms it had made on NW Natural's work plan as set forth in its October 18, 2017 comment letter.

In particular, the River Mile 4-7 Group was deeply concerned about EPA's decision to withdraw its General Comment 2 and Specific Comment 34 regarding the definition of the "Final Project Area" for the pre-remedial design work plan, which had expanded NW Natural's definition of the project area. As demonstrated by our presentation at the November 2 meeting with EPA, the existing sediment data do not support limiting the Project Area for NW Natural's interim pre-remedial design to the immediate vicinity of the Gasco site; to the contrary, the data support designation of a "Final Project Area" comprised of a much larger footprint that includes sediments downstream of the Gasco site that extend to at least RM 4. Limiting the project area as NW Natural has requested is technically unsupported, inefficient, and will inevitably lead to additional AOCs or remedial design for the same COCs located downstream of the current limited Project Area.

The River Mile 4-7 Group is particularly concerned about the documented, uncontained, and mobile contaminants from the Gasco site that exist adjacent to, below, and within the river channel. Under current conditions, this material within the PAH Zone can be expected to re-contaminate any interim remedial actions taken adjacent to and downriver of the Gasco site. Based on our recent supplemental data, the delineation of the NW Natural/Gasco project area should extend downriver to at least RM 4 along the western shoreline, and should include the entire width of the Willamette River between RM 5 and 6. Accordingly, we strongly urge EPA to reconsider its current limitation on the defined project area under Gasco's 2009 AOC.

Given the Gasco site's downstream impacts and our concerns regarding how this portion of the river will ultimately be remediated, the River Mile 4-7 Group intends to comment on the NW Natural early action project going forward. To facilitate this process, the River Mile 4-7 Group respectfully requests to be copied on any relevant future correspondence related to the Gasco site. Transparency and public comment are critical and will need to play a central role in setting the boundaries of the Gasco site's Final Project Area to ensure that all relevant technical information is considered and that the health and safety of the public and the environment are protected.

We appreciate your consideration of the scientific data we provided to you regarding ongoing sources and impacts from the NW Natural's Gasco site. For the reasons discussed above and at our meeting, we feel strongly about NW Natural's need to demonstrate source control at the Gasco site before any other work begins within RM 4-7 of the Portland Harbor Site; to do otherwise will result in recontamination of remediated areas, thereby extending the life cycle of the overall Site and unnecessarily increasing remedial costs..

We would like to continue our discussion regarding these issues. To that end, please let us know what dates are available for our Group to meet with EPA in February or March 2018. We also request that this letter and all presentation materials from the November 2 meeting be included in the administrative record for the Portland Harbor Superfund Site.

In the meantime, please do not hesitate to contact us directly if you have any questions or would like to further discuss the issues covered in the last meeting.

Yours truly,

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List of References:

1. NewFields June 10, 2015 Uhler A. and Krahforst K. *The nature and sources of PAH in sediments in the vicinity of the former Exxon Mobil terminal (2014 investigation)* [submitted March 2016]
2. NewFields March 9, 2016 Uhler A. and Krahforst K. *Concentrations and character of PAH in sediments in the proposed remedial alternatives area of the Portland Harbor Superfund site, River Miles 5-6 (2015 investigation)* [submitted March 2016]
3. NewFields August 26, 2016 Uhler A. *PAH chemical signatures – Portland Harbor Superfund site, River Miles 5-6 area*
4. NewFields January 24, 2017 Uhler A. *Evaluation of Northwest Natural (GASCO) 2010 Alkylated PAH sediment data - Portland Harbor Superfund site, River Miles 5-6 area*
5. NewFields March 5, 2015 Nuwer J. and Chin A. *Portland Harbor storm water – task 2: PAH loading estimates*
6. NewFields August 26, 2016 Nuwer J. *Portland Harbor storm water – areas of interest loading estimates*
7. NewFields October 17, 2016 Nuwer J. *Portland Harbor storm water loading study – conceptual approach*
8. NewFields December 16, 2016 Nuwer J. *Portland Harbor storm water investigation – cost estimate*
9. NewFields, May 1, 2017 Johnson J. *Evaluation of MGP waste in association with Willamette River contamination - GASCO former MGP facility*
10. Haley & Aldrich, Inc. July 13, 2017.
11. Helder Costa and Laura McWilliams, Ph.D. *Evaluation of Pyrogenic Source Signatures in Willamette River Sediments.*
12. Exponent, December 27, 2012. *PAH Characterization Study for Kinder Morgan Energy Partners, LP.* Paul Boehm and Kirk O'Reilly.
13. Paul Lundegard, Ph.D., December 6, 2011. *Sources of PAH in Portland Harbor/Willamette River Sediment – West Side Sediment between River Mile 3 and 9.*
14. FlowScience, John List. March 3, 2017. *PAH Fingerprinting Analysis for Portland Harbor Superfund site, River Mile 4-6. (Attachment 4 to Toyota Motor Sales' Lack of Nexus Statement Letter to EPA dated March 2, 2017).*

Technical presentations given during meeting on November 2, 2017:

1. NewFields, Dr. Al Uhler, Ph.D. *Forensic Chemistry – Nature of PAH in Sediments, Portland Harbor Superfund Site, River Miles 6.9 to 5, November 2, 2017. (PPT file).*
2. Haley & Aldrich, Laura McWilliams, Ph.D. and Helder Costa. *Pyrogenic PAH Source Evaluation, Willamette River Sediments, Portland Harbor Superfund Site, November 2, 2017 (PPT file).*
3. NewFields, Jon Nuwer and Jeffrey Johnson. *DNAPL and Stormwater Source Control Concerns, NW Natural Facility, November 2, 2017. (PPT file and associated movie files).*